Chapter 1 Composite Chips
第二章 复合材料籌碼

2. 1 Composite Chips Overview 復合材料籌碼概述

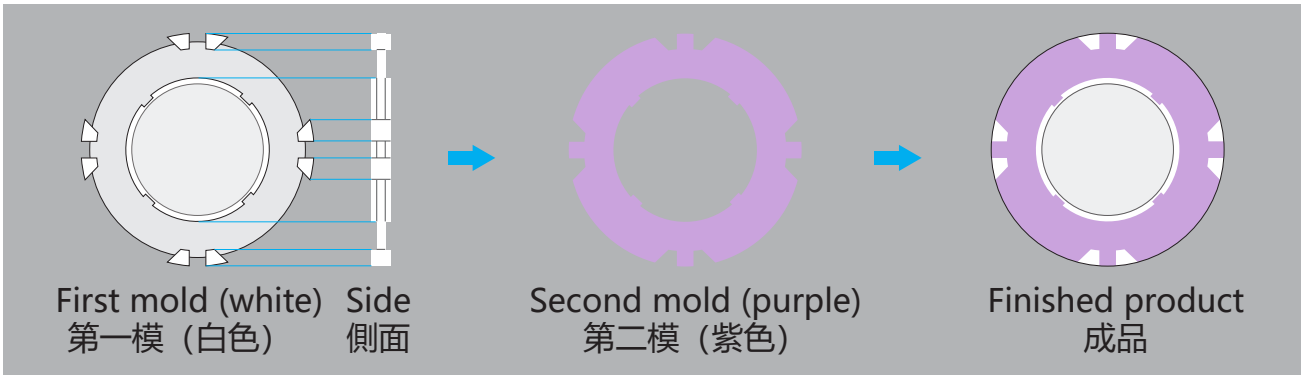
Composite chips are injection-molded casino chips made from a combination of materials, typically clay, plastic, adhesives, and metal or ceramic powders. Iron or copper sheets or RFID chips may be embedded in the chips to enhance their weight, counterfeit resistance, and traceability. Composite materials have a heavy feel, a ceramic-like texture, and are wear-resistant. Composite materials are often used in professional casinos for their excellent grip and stackability.

復合材料籌碼（Composite Chips）是由多種材料組合注塑成型的casino籌碼，通常由黏土、塑料、黏合劑、金屬或陶瓷粉末等復合而成，中間可嵌入鐵片、銅片或RFID芯片，以增強其重量感、防偽性能及可追蹤性。復合材料手感沉重，具有類似陶瓷的質感，且耐磨損。復合材料常用於專業casino，因其能提供良好的抓握感和堆疊性。

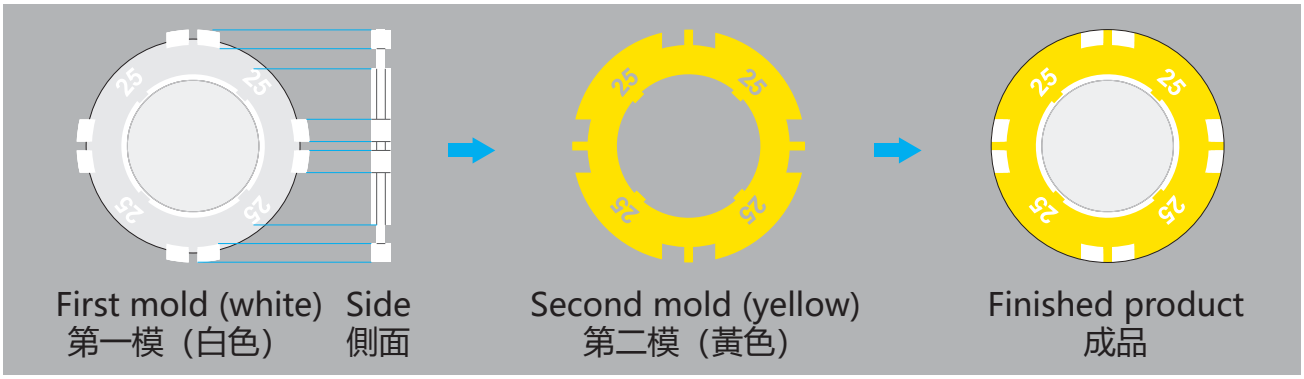
Composite chips come in two basic types: two-color and three-color. Based on these two basic types, a variety of chip styles are derived by adding patterns, numbers, or letters to the inner circle of the chip.

復合材料籌碼分有雙色款和三色款兩種基本類型。在兩種基本類型的基礎上，在籌碼的內圈增加圖案、數字或英文等衍生出多種多樣的籌碼款式。

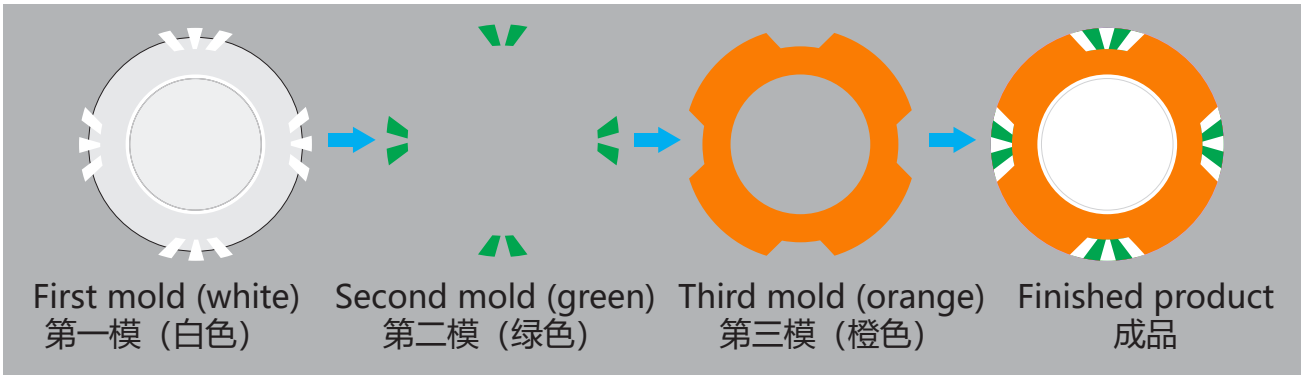
Composite chip type mold and schematic diagram:
復合材料籌碼類型模具與示意圖：
（1）Two-tone style 雙色款：



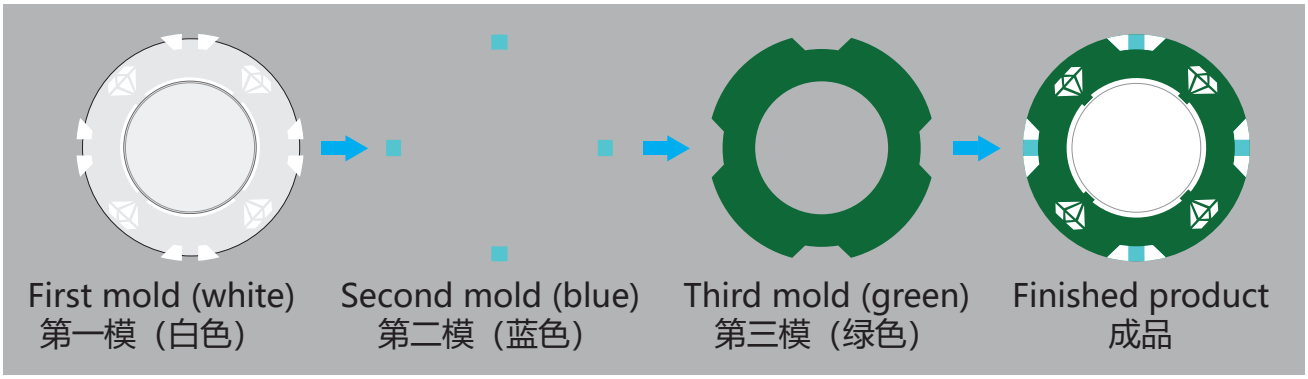
(2) Two-color digital mold (taking the digital mold as an example):
雙色數字款（以數字款為例）：



(3) Three-tone style 三色款:

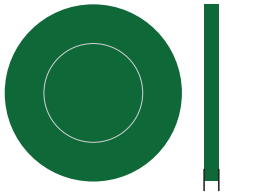
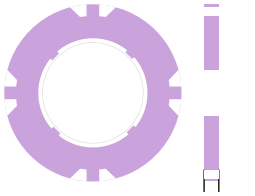
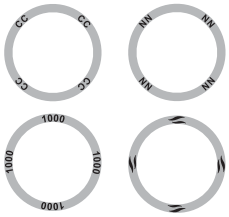
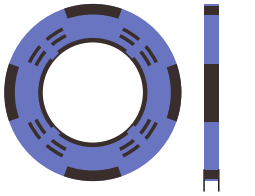
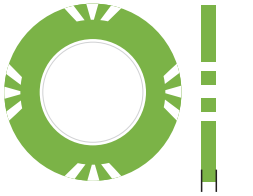
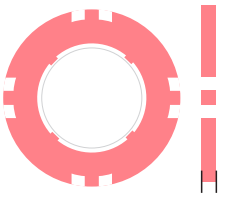
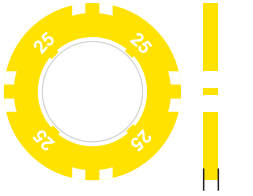


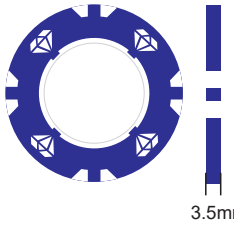
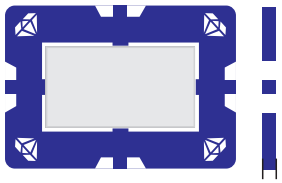
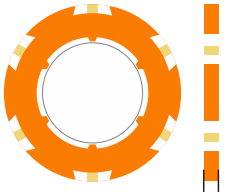
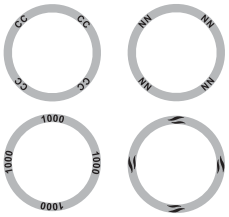
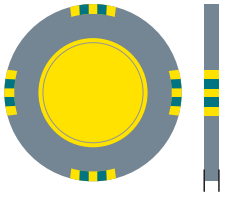
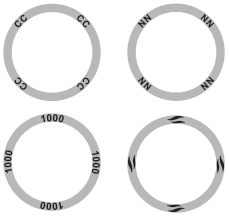
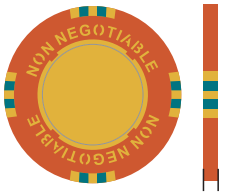
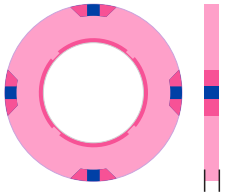
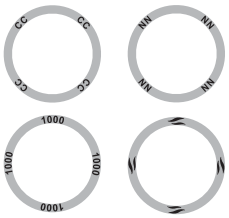
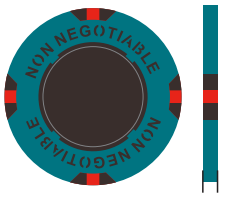
(4) Three-color diamond mold (taking the pattern mold as an example)
三色鑽石款（以圖案款為例）：

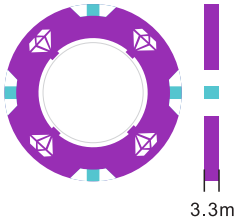
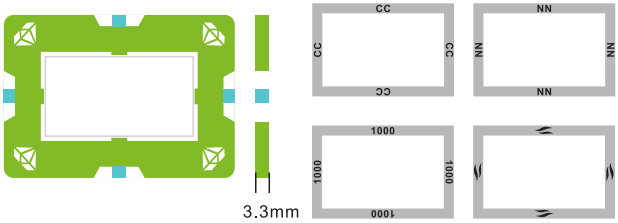
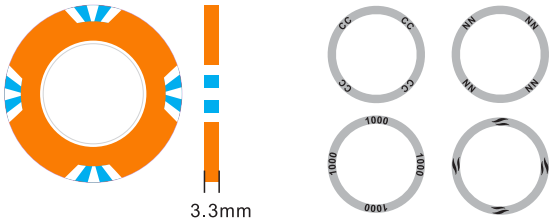
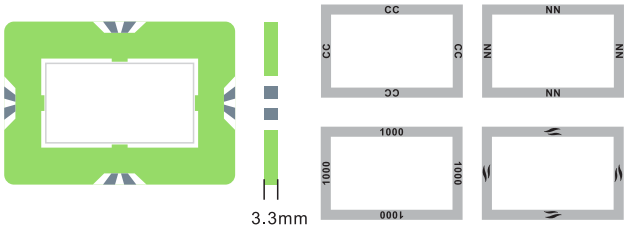
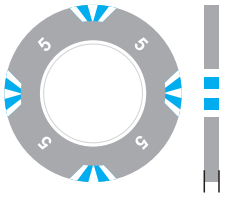


2. 2 Composite chip mold and basic parameters

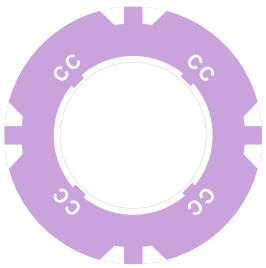
復合材料籌碼模具與基本參數

	Inner Ring Design 內圈設計樣式	Size 尺寸	W (Iron Core) 重量(鐵芯)	W(Copper Core) 重量(銅芯)	W(RFID) 重量(芯片)
• One-tone單色					
 3.3mm	/	40mm	10g	/	5g
		45mm	10g	/	10g
		50mm	10g	/	10g
• Two-tone 雙色					
 3.3mm		40mm	12.27g	13.32g	7g
		43mm	13.96g	14.39g	8g
		45mm	14.15g	15.31g	8.45g
 3.3mm	/	40mm	12.27g	13.32g	7g
		43mm	13.96g	14.39g	8g
		45mm	14.15g	15.31g	8.45g
 3.0mm	/	40mm	10g	/	5g
		45mm	10g	/	10g
		50mm	10g	/	10g
 4.5mm	/	68*48mm	40.2g	/	/
		81*56mm	57.8g	/	/
 3.0mm	/	40mm	10g	/	5g
		45mm	10g	/	10g
		50mm	10g	/	10g
 3.3mm	Denomination style 面額款式: 40mm: 25/100/500/1000/5000 45mm: 10000/50000/100000	40mm	12.27g	13.32g	7g
		45mm	14.15g	15.31g	8.5g

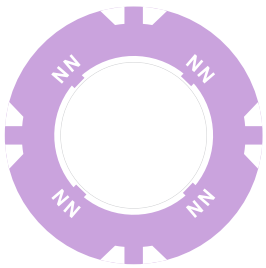
	Inner Ring Design 內圈設計樣式	Size 尺寸	W (Iron Core) 重量(鐵芯)	W(Copper Core) 重量(銅芯)	W(RFID) 重量(芯片)
• Two-tone 雙色					
 3.5mm	/	40mm	13.4g	/	7g
		45mm	14.9g	/	8g
		50mm	21.1g	/	9.35g
 4.5mm	/	68*48mm	40.2g	/	/
		81*56mm	57.8g	/	/
• Three-tone三色					
 3.3mm		40mm	12.27g	13.32g	7g
		43mm	13.96g	14.39g	8g
		45mm	14.15g	15.31g	8.45g
 3.3mm		40mm	12.27g	13.32g	7g
		43mm	13.96g	14.39g	8g
		45mm	14.15g	15.31g	8.45g
 3.0mm	/	40mm	10g	/	5g
		43mm	10g	/	10g
		45mm	10g	/	10g
 3.3mm		40mm	12.27g	13.32g	7g
		43mm	13.96g	14.39g	8g
		45mm	14.15g	15.31g	8.45g
 3.0mm	/	40mm	10g	/	5g
		45mm	10g	/	10g
		50mm	10g		10g

	Inner Ring Design 內圈設計樣式	Size 尺寸	W (Iron Core) 重量(鐵芯)	W(Copper Core) 重量(銅芯)	W(RFID) 重量(芯片)
• Three-tone三色					
	/	40mm 43mm 45mm 50mm	12.27g 13.96g 14.15g 21.94g	13.32g 14.39g 15.31g 18.41g	7g 8g 8.45g 11.35g
		48*68mm 56*81mm	41.02g 56.75g	40.8g 56.8g	25g 34.5g
		40mm 43mm 45mm 50mm	12.27g 13.96g 14.15g 21.94g	13.32g 14.39g 15.31g 18.41g	7g 8g 8.45g 11.35g
		48*68mm 56*81mm	41.02g 56.75g	40.8g 56.8g	25g 34.5g
	Denomination style 面額款式: 40mm: 5/10/25/50/100/500/1000/10000 43mm: 10000/50000/100000 45mm: 1000/5000/10000/50000/100000/500000 50mm: 10000/1000000	40mm 43mm 45mm 50mm	12.27g 13.96g 14.15g 21.94g	13.32g 14.39g 15.31g 18.41g	7g 8g 8.45g 11.35g

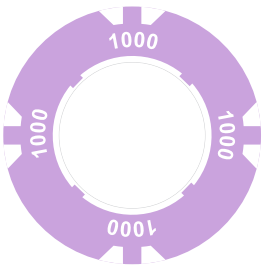
Inner ring design style example 內圈設計樣式示例:



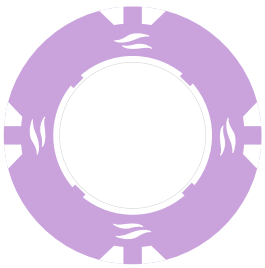
CC letter style
CC字母款



NN letter style
NN字母款



Digital style
数字款



Pattern style
图案款

2. 3 Composite chips color and denomination
復合材料籌碼的顏色與面額

Composite chip color card: see Attachment 3

復合材料籌碼色卡：見附件三

There are two ways to display the denomination of chips: the first is to use a mold containing the denomination; the second is to print the denomination on a patch. Patches are usually used to identify the face value, brand, pattern, or anti-counterfeiting information of the chip. They are embedded in the center of the chip and serve a decorative and functional purpose. As shown below:

籌碼的面額有兩種展示方式：第一種是含有面額的模具；第二種是將面額印在貼片上。貼片通常用於標識籌碼的面值、品牌、圖案或防偽信息，嵌入籌碼的中心部分，起到裝飾和功能性的作用。如下圖所示：

ⓘ Notice: The patch is located in the depression between the front and back of the composite chip. Any pattern and denomination can be made.

注意：貼片位於復合材料籌碼正反兩面中間的凹陷處，可制定任意圖案，任意面額。

Frosted technology
磨砂工艺

2. 4 Manufacturing technology 制造工藝

2. 4. 1 Manufacturing process 制造流程

- Injection molding: The raw material is placed in the mold of the first mold, heated and pressurized, and then cooled to form the first mold finished product.

注塑成型：將原料放入第一模的模具中加熱加壓，冷卻後形成第一模成品。

- Color production: Based on the finished product of the first mold, the second mold and the third mold are used to heat and pressurize the color into the finished product.

  顏色制作：在第一模成品的基礎上，使用第二模、第三模模具將顏色加熱加壓成成品。

- Trimming and polishing: Lathe-type rotary trimming ensures that all chips are of consistent thickness and roundness.

  修邊打磨：車床式旋轉修邊，確保所有籌碼厚度與圓度一致。

- Middle patch: stick the round or square finished patch on the center depression of the chip.

  中間貼片：將圓形或方形成品貼片貼於籌碼中心凹陷處。

- Surface treatment: Remove dust and foreign matter from the surface of the finished chips and then blister pack them.

  表面處理：去除籌碼成品表面灰塵異物後吸塑包裝。

2. 4. 1 Patch technology 貼片工藝

There are three finishes for patches: frosted, laser, and glossy. Frosted is the most commonly used, creating a unique visual effect with a bright, refractive effect. Glossy patches offer a high overall gloss and a smooth, delicate feel. Custom designs are available upon request.

貼片共有三種工藝：磨砂、鐳射和光面。其中，磨砂工藝最為常用，鐳射貼片呈現光亮折射效果，視覺獨特；光面貼片整體光澤度高，手感平滑細膩。可根據客戶需求定制設計。